



Assessment and Strategy to Improve the Health of South Dakota Infants



Infant Mortality

Project Team:

Dr. Ed Mailloux, Pediatrician at Sioux Valley Clinic
Dr. Jeffrey Boyle, OBGYN Sioux Valley Clinic
Dr. Larry Fenton, Neonatologist and USD Pediatrics Department Chair
Dr. Nanci Van Peursem, Coteau Des Prairies Clinic
Willeen Druley, Women's Health Consultant, Aberdeen Area IHS
Dr. Gail Gray, Director, Division of Health and Medical Services
Dr. Lon Kightlinger, State Epidemiologist, DOH
Nancy Shoup, Perinatal Nurse Consultant, DOH
Kayla Tinker, Administrator Office of Family Health, DOH
Kathlene Mueller, Administrator, Office of Data, Statistics, and Vital Records, DOH
Doneen Hollingsworth, Secretary of Health

DOH Report Team:

Mary Sarvis, Policy Analyst
Barb Buhler, Information Officer
Mark Gildemaster, Management Analyst

South Dakota Department of Health
600 East Capitol Avenue
Pierre, South Dakota

Telephone: (605) 773-3361

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Executive Summary

In 2004, the South Dakota Department of Health (DOH) established a goal to improve birth outcomes and improve health of infants, children and adolescents in South Dakota. The performance measure for this goal was to reduce the infant mortality in South Dakota to an incidence of no more than 6.0 infant deaths per 1,000 live births by the year 2010.

The 2003 infant mortality rate of 6.6 per 1,000 live births was the benchmark. When the 2004 data was released, it showed an infant mortality rate of 8.2 per 1,000 live births. This increase caused significant concern. The Secretary of Health appointed a team to help the DOH address the issue and reverse the trend in order to meet the DOH 2010 goal.

The team reviewed the data and determined activities for reducing the infant mortality rate. This report is a summary of the data reviewed and activities that the DOH will use to reduce the infant mortality rate in South Dakota.

The committee found that in South Dakota infant death is more common among mothers who:

- received no prenatal care;
- smoked during their pregnancy;
- were younger than 19 years of age;
- have not finished high school;
- were American Indian; and
- lived in a frontier* county.

Comparison of Infant Mortality Rate by Selected Characteristics, 2000-2005

Higher Infant Mortality Rate (rate per 1,000 live births)	Lower Infant Mortality Rate (rate per 1,000 live births)
Premature birth (< 37 weeks) – 42.4	Normal gestation – 3.5
No prenatal visits – 36.0	1 or more prenatal visits – 6.6
Twins or more – 24.3	Single birth – 6.4
American Indian – 12.9	White – 5.5
Tobacco user – 10.4	Non-tobacco user – 6.1
Did not finish high school – 10.3	College graduate or higher – 4.6
Single mother – 9.1	Married mother – 5.8
Frontier county – 8.8 *	Rural county – 6.2 *
Male baby – 8.0	Female baby – 5.8

* See page 7 for frontier and rural county defined

As a result of its findings, the committee identified six key activities to reduce the infant mortality rate to 6.0 by 2010.

- Develop a media campaign directed at helping women know they are pregnant and the importance of not smoking and prenatal care;
- establish a physician training program to help physicians diagnose critically ill children and understand the importance of prenatal care and smoking;
- enhance the relationship between Healthy Start and DOH programs;
- work with the Trauma System Steering Committee to improve medical response for sick and injured infants in rural and frontier counties;
- strengthen current services for teens and young mothers; and
- publish a report to increase awareness.

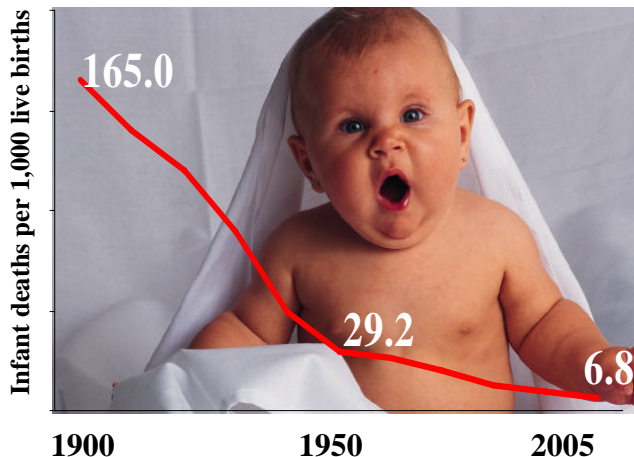
Unless indicated all data are from the South Dakota Department of Health, Office of Data, Statistics, and Vital Records.

Introduction

Each year since 2000, approximately 11,000 infants were born to residents of South Dakota. Tragically, each year 50 to 100 of these babies die within their first year of life. South Dakota's infant mortality rate ranks in the bottom half of the nation.

Infant mortality is influenced by many factors surrounding birth, including but not limited to: the health of the mother, prenatal care, quality of health services delivered to the mother and child, and infant care. In addition, high infant mortality rates are often considered preventable by the medical community and thus may be reduced by education and care programs.

Prior to 1900, infant mortality rates of 200 and 300 hundred per 1,000 live births were common throughout the world. The infant mortality rate fluctuated sharply according to the weather, the harvest, war, and epidemic disease. In severe times, a majority of infants would die within one year. In good times, perhaps 200 per 1,000 live births would die. In some cultures, children were not named until they had sprouted teeth or survived a year.



Source: Infant Mortality and Life Expectancy¹

The U.S. infant mortality rate has declined since 1900, from 165.0 per 1,000 live births, except between 2001 and 2002, when it rose for the first time since 1958. The rate in 2005, the latest preliminary data year for which statistics are available, was 6.8 deaths for every 1,000 live births, compared to 7.0 in 2002.

Global infant mortality
2006 Estimates
(deaths of infants <1 yr per 1,000 live births)

This good news must be placed in context, however. Although the U.S. spends more on health care than any other country, the infant mortality rate lags behind most other industrialized nations (U.S. Department of Health and Human Services, 2001). And despite the wide range of expertise that has been brought to bear on this problem, the first weeks of life remain a time of high risk for many babies. Most of the progress in preventing infant mortality has come about in what physicians call the "post-neonatal period" from 28 days after birth to 1 year old.

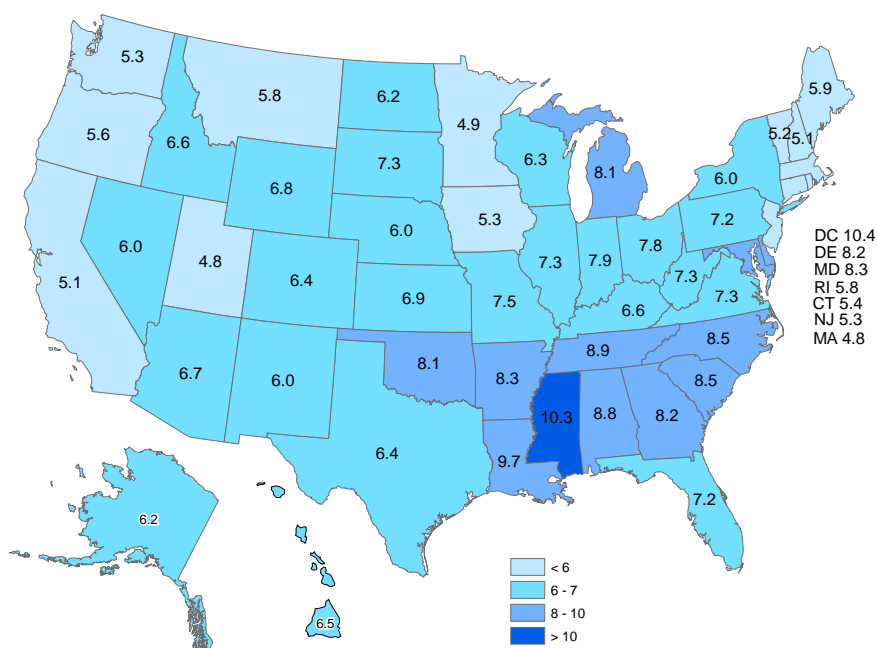
Angola	185.4	Brazil	28.6	Poland	7.2
Afghanistan	160.2	Vietnam	25.1	United States	6.4
Somalia	114.9	Trinidad-Tobago	25.1	Taiwan	6.3
Nigeria	97.1	Korea, North	23.3	Cuba	6.2
Tanzania	96.5	China	23.1	Korea, South	6.2
Ethiopia	93.6	Philippines	22.8	Italy	5.8
Madagascar	75.2	Colombia	20.4	Greece	5.4
Haiti	71.7	Mexico	20.3	Ireland	5.3
Pakistan	70.5	Thailand	19.5	United Kingdom	5.1
Sudan	61.1	Georgia	18.0	Canada	4.7
South Africa	60.7	Jamaica	16.0	Australia	4.6
Kenya	59.3	Russia	15.1	Spain	4.4
India	54.6	Argentina	14.7	France	4.2
Bolivia	51.8	Saudi Arabia	12.8	Germany	4.1
Iraq	48.6	Ukraine	9.9	Norway	3.7
Iran	40.3	Costa Rica	9.7	Japan	3.2
Indonesia	34.4	Puerto Rico	9.1	Sweden	2.8
Egypt	31.3	Chile	8.6	Singapore	2.3

CIA World Fact Book, 2006 estimates²
www.cia.gov/cia/publications/factbook/rankorder/2091rank.html

Infant Mortality in the United States

The map in Figure 1 shows the infant mortality rates by state for the years 2003 to 2005. These rates are only preliminary data and are not final. The rates are based on data published in the National Vital Statistics Reports, Volume 54, Number 20⁵, on the CDC website.

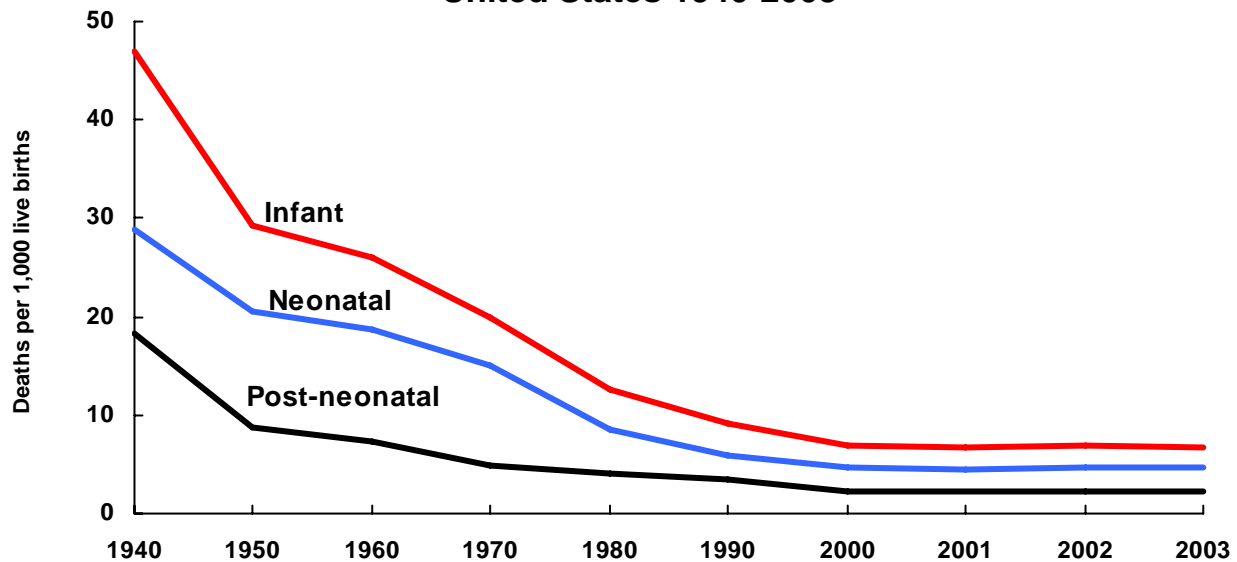
**Figure 1: United States infant mortality
(deaths of infants <1 yr per 1,000 live births, 2003-2005)**



District of Columbia	10.4	South Dakota	7.3	Nevada	6.0
Mississippi	10.3	Illinois	7.3	Nebraska	6.0
Louisiana	9.7	Pennsylvania	7.2	Maine	5.9
Tennessee	8.9	Florida	7.2	Montana	5.8
Alabama	8.8	Kansas	6.9	Rhode Island	5.8
South Carolina	8.5	Wyoming	6.8	Oregon	5.6
North Carolina	8.5	United States	6.7	Connecticut	5.4
Maryland	8.3	Arizona	6.7	Washington	5.3
Arkansas	8.3	Idaho	6.6	Iowa	5.3
Georgia	8.2	Kentucky	6.6	New Jersey	5.3
Delaware	8.2	Hawaii	6.5	Vermont	5.2
Michigan	8.1	Texas	6.4	California	5.1
Oklahoma	8.1	Colorado	6.4	New Hampshire	5.1
Indiana	7.9	Wisconsin	6.3	Minnesota	4.9
Ohio	7.8	North Dakota	6.2	Utah	4.8
Missouri	7.5	Alaska	6.2	Massachusetts	4.8
Virginia	7.3	New York	6.0		
West Virginia	7.3	New Mexico	6.0		

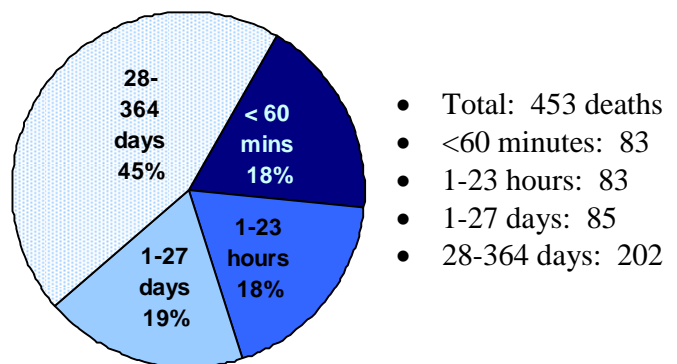
Infant, Neonatal and Post-neonatal Mortality

Figure 2: Infant, neonatal, and post-neonatal mortality rates: United States 1940-2003



- Infant mortality rates in the United States have continually declined since 1940.
- In South Dakota, fifty-five percent of all infants died in the neonatal period - age birth through 27 days of age.
- In South Dakota, forty-five percent of all infants died in the post-neonatal period -age 28 days to 1 year.
- South Dakota had a considerable spike in neonatal deaths in 2004.

Figure 3: Age of infant at death, South Dakota, 2000 - 2005



- Total: 453 deaths
- <60 minutes: 83
- 1-23 hours: 83
- 1-27 days: 85
- 28-364 days: 202

Figure 4: Neonatal and post-neonatal mortality rates, South Dakota 1990 – 2005

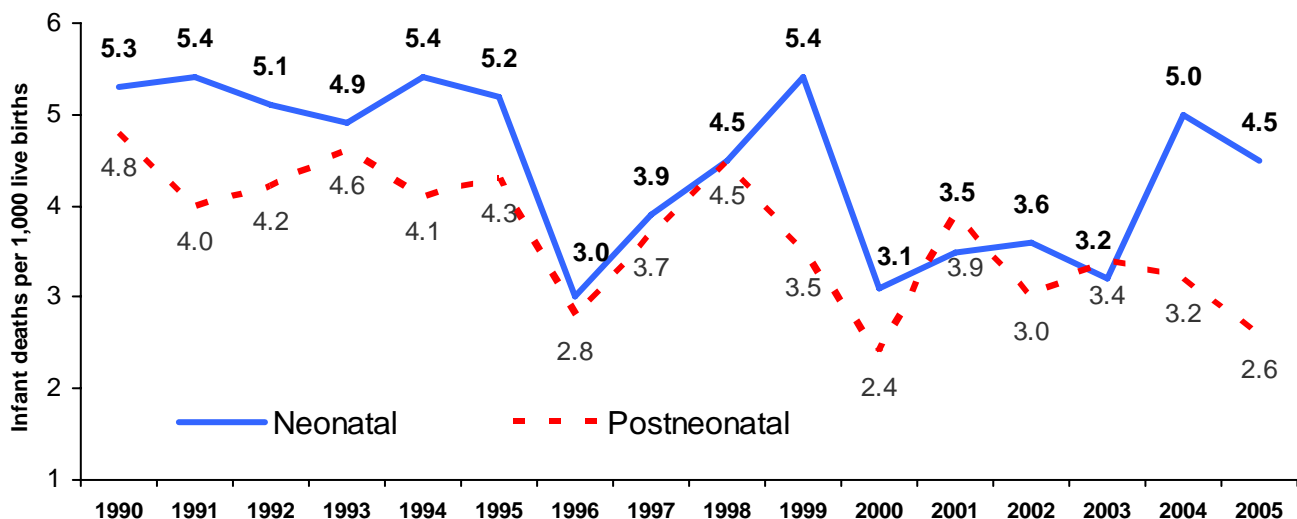
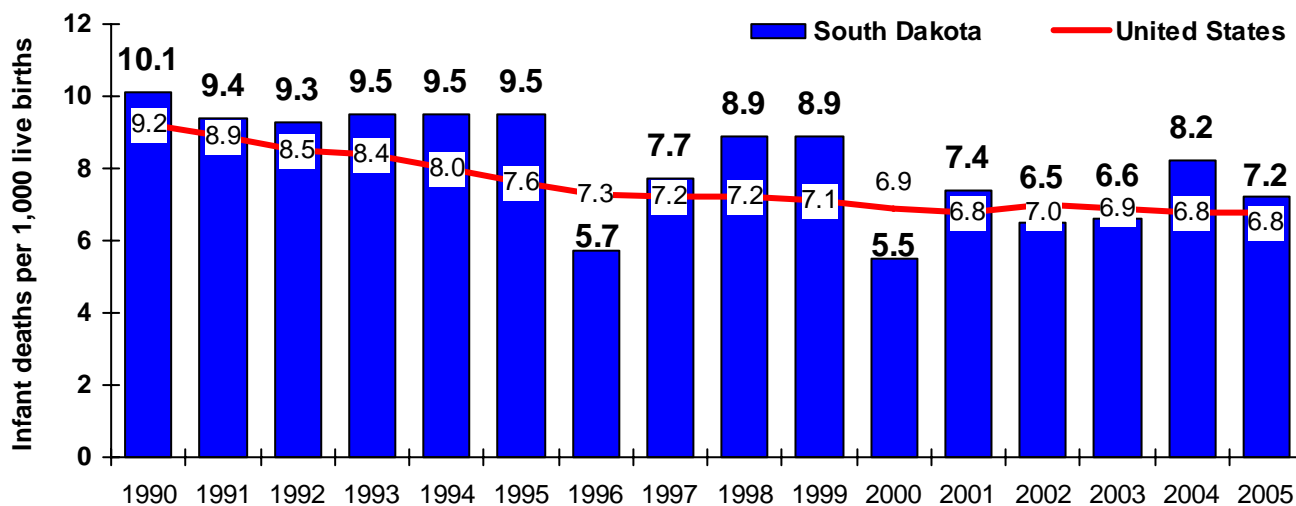


Figure 5: Infant mortality rate, South Dakota and USA, 1990 – 2005

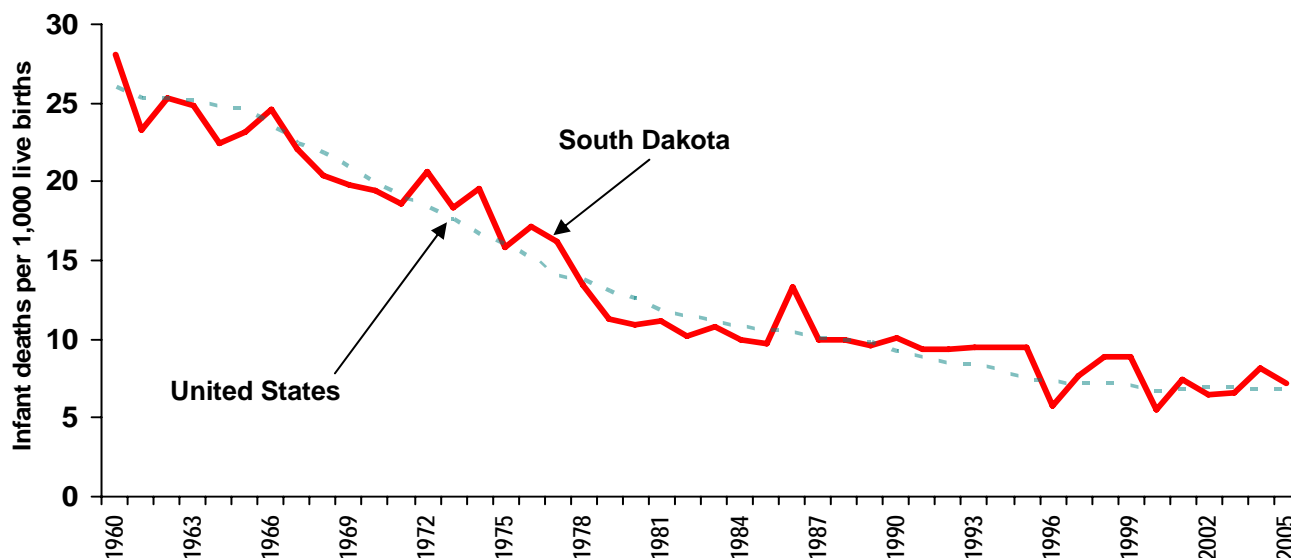


Note: U.S. 2005 and 2004 data are provisional.

Infant Mortality Trends

- South Dakota residents reached a low point in 2000 of 5.5 infant deaths per 1,000 live births.
- South Dakota infant mortality rates were lower than the United States rates in 1996, 2000, 2002, and 2003, but higher in all other years since 1990.
- In 2005, the infant mortality rate was 7.2. When examined by race, the infant mortality rate was 11.6 for American Indians and 6.1 among whites, per 1,000 live births, showing a large disparity.
- The United States demonstrated a steady decline, whereas, South Dakota's infant mortality rate experienced a more erratic decline.

Figure 6: Infant mortality rates, South Dakota and United States, 1960-2005



Note: U.S. 2004 and 2005 rates are provisional

Table 1: Infant mortality rates, by selected characteristics and race of mother, United States 2003 and South Dakota 2000-2005

United States		Prenatal Care		Gestation Period - Weeks			Tobacco Use		Birthweight- Grams ⁹		
2003	Total	1st Trimester	No Care	< 32	32-36	37-41	Yes	No	< 1,500	1,500 - 2,499	> 2,500
All	6.8	6.2	34.1	188.2	8.5	2.4	11.3	6.6	252.0	15.0	2.3
White	5.7	5.2	25.2	174.8	8.2	2.2	9.9	5.3	240.0	15.2	2.1
American Indian	8.7	8.0	32.0	161.1	11.6	4.5	13.4	7.9	253.9	18.7	4.5
South Dakota		Prenatal Care		Gestation Period - Weeks			Tobacco Use		Birthweight- Grams ⁹		
2000-2005	Total	1st Trimester	No Care	< 32	32-36	37-41	Yes	No	< 1,500	1,500 - 2,499	> 2,500
All	6.9	6.3	36.0	221.7	12.5	3.5	10.4	6.1	251.8	18.3	3.4
White	5.5	5.3	26.8	216.4	9.1	2.6	7.9	5.0	241.2	15.7	2.4
American Indian	12.9	12.4	46.0	242.1	26.2	7.4	16.9	11.3	283.1	33.7	7.5

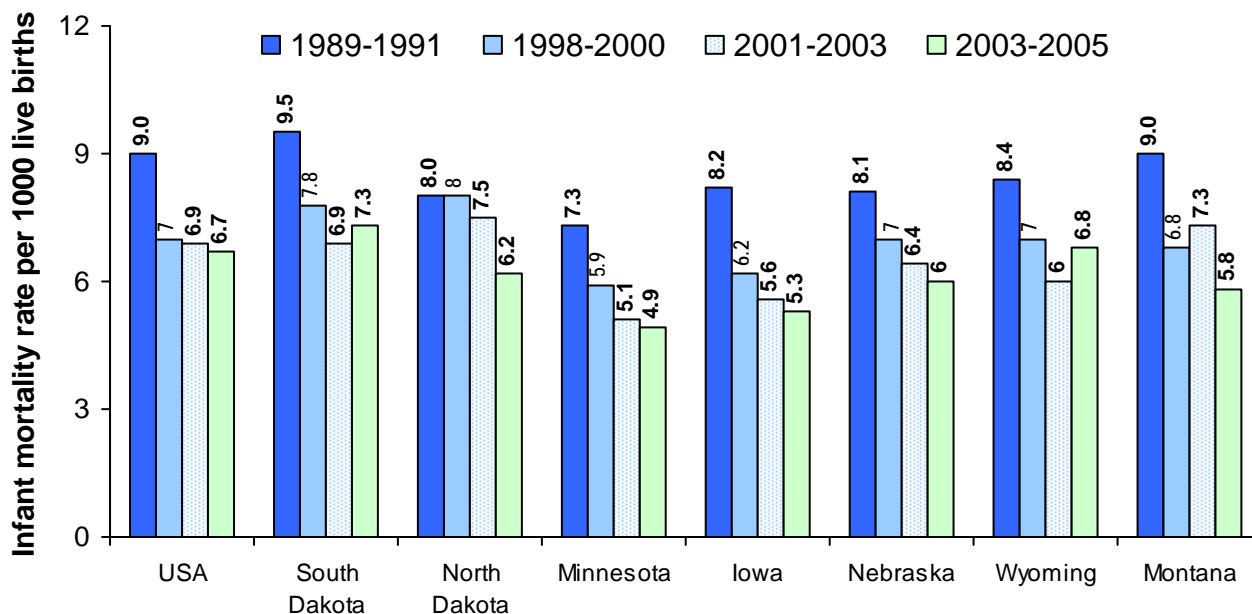
Note: Infant mortality rates are per 1,000 live births.

Several years of South Dakota data were combined due to small numbers.

Source: United States, National Vital Statistics Reports, Volume 54, Number 16 ⁴

- South Dakota had a higher infant mortality rate due to preterm births than the United States as a whole.
- South Dakota's American Indian population had a higher total infant mortality rate and tobacco use rate than the national rate.
- South Dakota's most recent infant mortality rate was higher than our neighboring states.

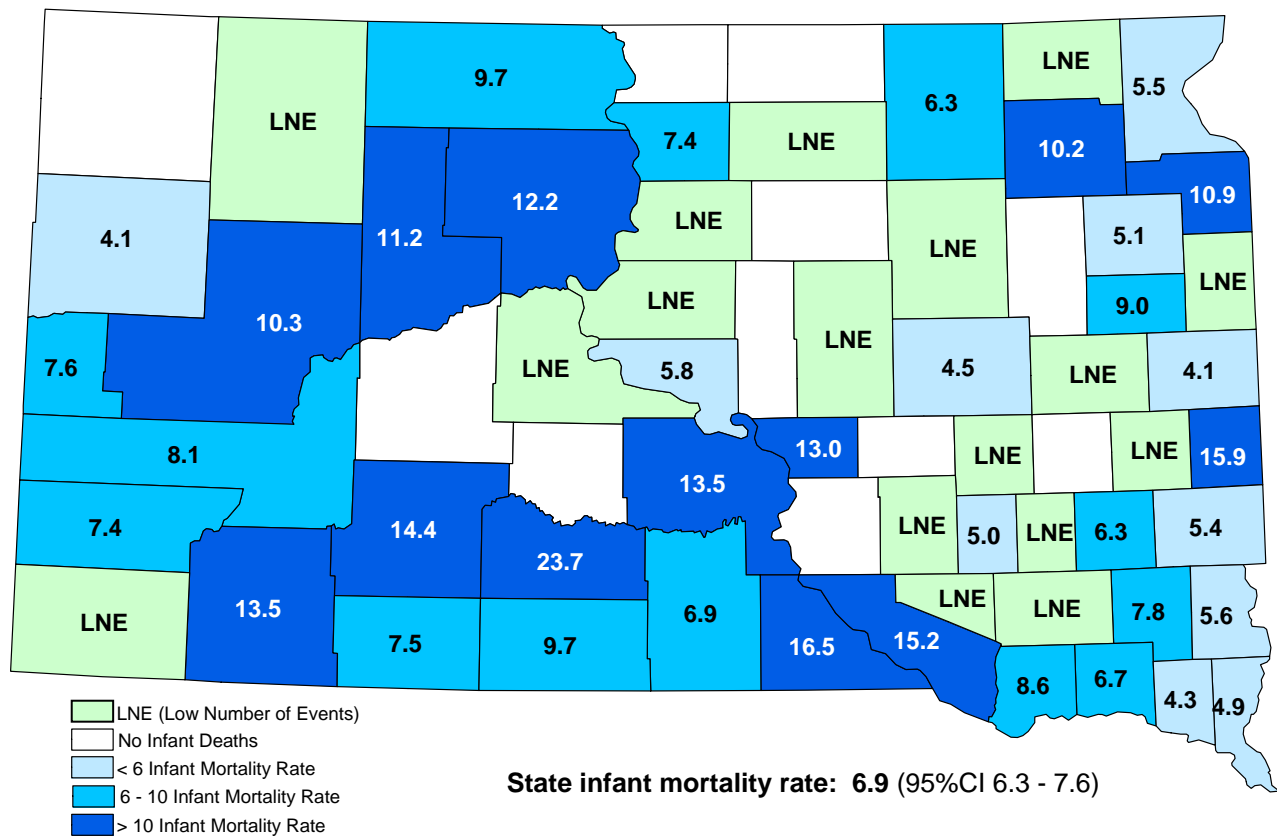
Figure 7: Infant mortality rates, United States, South Dakota and neighboring states, 1989 – 2005 (Infant deaths per 1,000 live births)



Source: NCHS, Health, United States, 2006, page 184 ⁸

2003-2005 Provisional data NCHS, NVS Reports, Volume 54, Number 20 ⁵

Figure 8: South Dakota infant mortality rates, by county of residence 2000-2005



Infant Mortality by County

- Frontier counties had a higher infant mortality rate (8.8) than rural counties (6.2) or urban counties (6.4). (See footnote.)
- Seventy percent of counties that had an infant mortality rate of 10 or greater reported a higher percent of mothers who had no prenatal care.
- Thirteen of the 66 counties had an infant mortality rate of over 10.
- Eleven counties reported no infant deaths in the six-year reporting period.

Footnote:

- Frontier counties have 6 or less persons per square mile.
- Rural counties have more than 6 persons per square mile and no large population center.
- Urban counties have a population center of 50,000 or more.

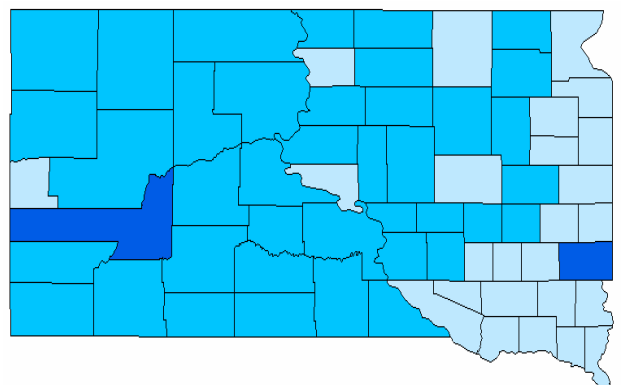


Table 2: South Dakota births, birth rate, infant mortality rate, (total, neonatal, and post-neonatal), by county of residence, 2000-2005 (deaths per 1,000 live births)

County	Births		Infant Deaths			
	Number	Rate	Total Infant		Neonatal	Post-neonatal
			Number	Rate	Rate	Rate
South Dakota	65,346	14.4	453	6.9	3.8	3.1
Aurora	174	9.5	LNE	LNE	LNE	LNE
Beadle	1,108	10.8	5	4.5	4.5	0.0
Bennett	401	18.7	3	7.5	LNE	LNE
Bon Homme	348	8.0	3	8.6	8.6	0.0
Brookings	1,953	11.5	8	4.1	2.6	1.5
Brown	2,710	12.7	17	6.3	3.7	2.6
Brule	376	11.7	0	0.0	0.0	0.0
Buffalo	308	25.3	4	13.0	LNE	LNE
Butte	732	13.4	3	4.1	LNE	LNE
Campbell	67	6.3	0	0.0	0.0	0.0
Charles Mix	923	16.5	14	15.2	6.5	8.7
Clark	241	9.7	0	0.0	0.0	0.0
Clay	932	11.5	4	4.3	LNE	LNE
Codington	2,159	13.9	11	5.1	3.2	1.9
Corson	517	20.6	5	9.7	LNE	LNE
Custer	403	9.2	3	7.4	LNE	LNE
Davison	1,591	14.1	8	5.0	3.8	1.3
Day	391	10.4	4	10.2	10.2	0.0
Deuel	300	11.1	LNE	LNE	LNE	0.0
Dewey	898	25.1	11	12.2	5.6	6.7
Douglas	204	9.8	LNE	LNE	0.0	LNE
Edmunds	259	9.9	LNE	LNE	0.0	LNE
Fall River	391	8.7	LNE	LNE	LNE	LNE
Faulk	151	9.5	0	0.0	0.0	0.0
Grant	458	9.7	5	10.9	LNE	LNE
Gregory	243	8.5	4	16.5	LNE	LNE
Haakon	117	8.9	0	0.0	0.0	0.0
Hamlin	553	16.6	5	9.0	LNE	LNE
Hand	178	7.9	LNE	LNE	LNE	0.0
Hanson	328	17.4	LNE	LNE	0.0	LNE
Harding	77	9.5	0	0.0	0.0	0.0
Hughes	1,216	12.3	7	5.8	3.3	1.6
Hutchinson	504	10.4	LNE	LNE	LNE	0.0
Hyde	110	11.0	0	0.0	0.0	0.0
Jackson	348	19.8	5	14.4	LNE	LNE
Jerauld	132	9.6	0	0.0	0.0	0.0
Jones	68	9.5	0	0.0	0.0	0.0
Kingsbury	317	9.1	LNE	LNE	LNE	LNE
Lake	717	10.6	LNE	LNE	LNE	LNE
Lawrence	1,439	11.0	11	7.6	4.9	2.8
Lincoln	3,026	20.9	17	5.6	3.6	2.0
Lyman	443	19.0	6	13.5	6.8	6.8
McCook	477	13.6	3	6.3	0.0	6.3
McPherson	141	8.1	0	0.0	0.0	0.0
Marshall	244	8.9	LNE	LNE	LNE	0.0
Meade	2,223	15.3	23	10.3	5.8	4.5
Mellette	211	16.9	5	23.7	LNE	LNE
Miner	167	9.7	0	0.0	0.0	0.0
Minnehaha	14,716	16.5	79	5.4	3.3	2.1
Moody	504	12.7	8	15.9	11.9	4.0
Pennington	8,771	16.5	71	8.1	4.2	3.9
Perkins	175	8.7	LNE	LNE	0.0	LNE
Potter	155	9.6	LNE	LNE	LNE	0.0
Roberts	910	15.1	5	5.5	LNE	LNE
Sanborn	156	9.7	LNE	LNE	LNE	0.0
Shannon	2,149	28.7	29	13.5	3.7	9.3
Spink	493	11.0	LNE	LNE	LNE	0.0
Stanley	228	13.7	LNE	LNE	LNE	LNE
Sully	122	13.1	LNE	LNE	LNE	0.0
Todd	1,548	28.5	15	9.7	2.6	7.1
Tripp	433	11.2	3	6.9	6.9	0.0
Turner	510	9.6	4	7.8	7.8	0.0
Union	1,023	13.5	5	4.9	LNE	LNE
Walworth	408	11.4	3	7.4	LNE	LNE
Yankton	1,503	11.6	10	6.7	4.0	2.7
Ziebach	268	17.7	3	11.2	LNE	LNE

LNE = Low number of events - Department of Health policy prohibits publishing vital events in cells with less than three events at a county level.

Figure 9: South Dakota neonatal mortality rates, by county of residence 2000-2005

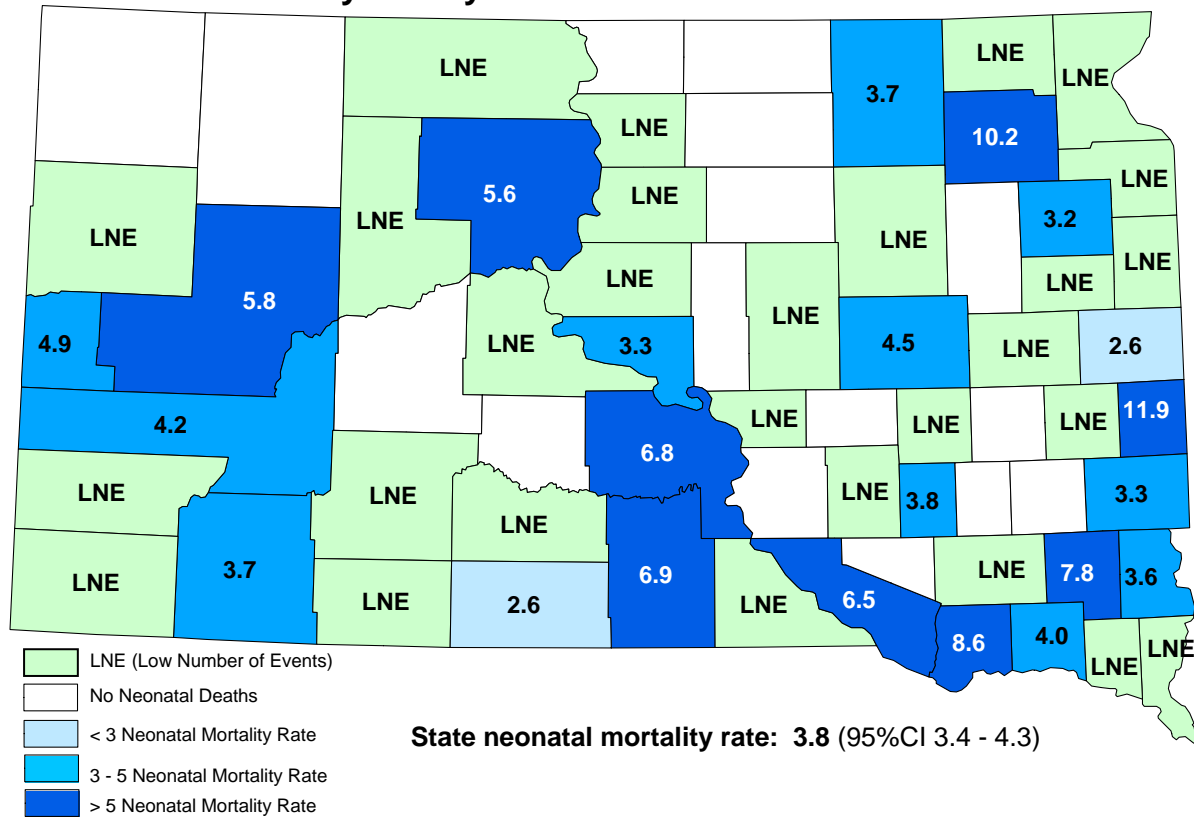
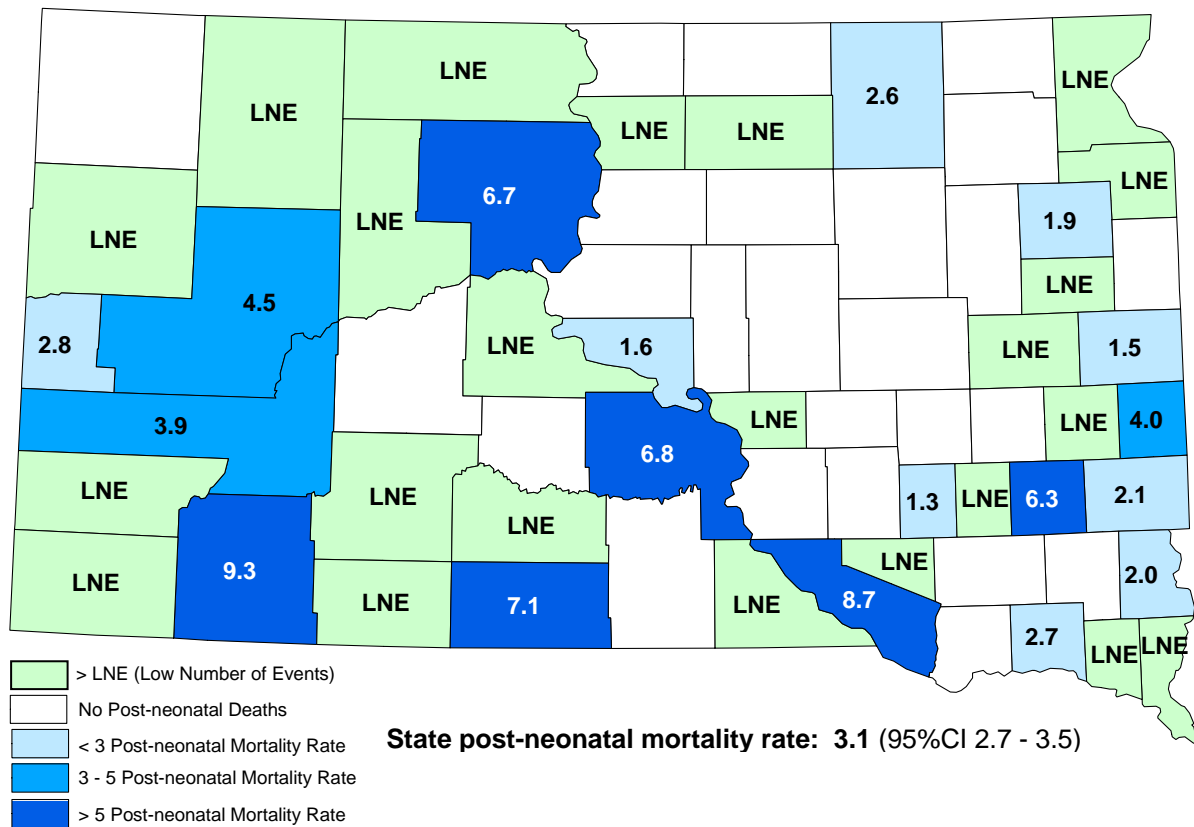
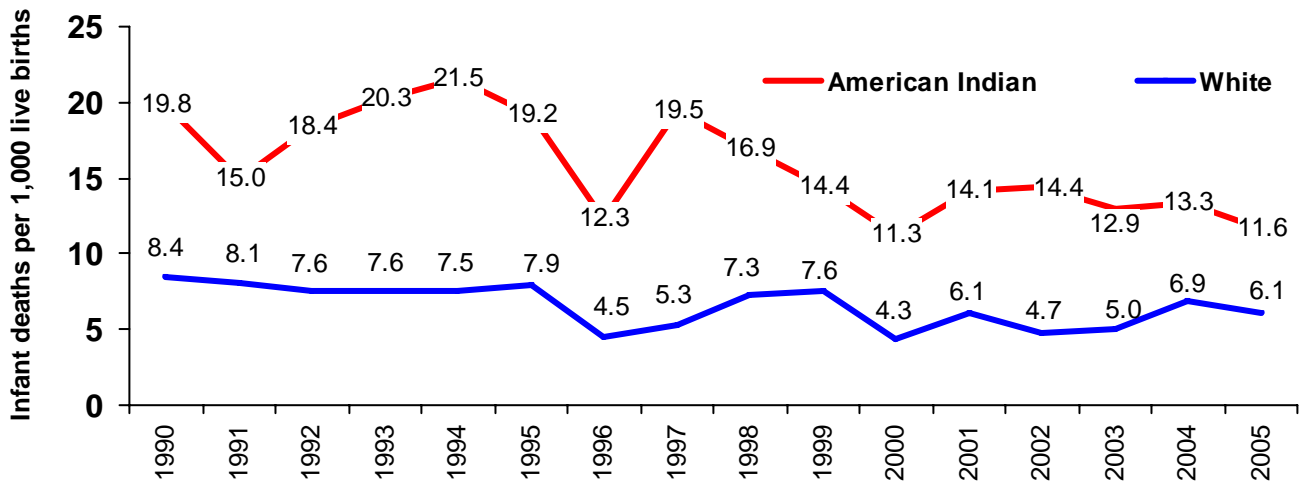


Figure 10: South Dakota post-neonatal mortality rates, by county of residence 2000-2005



Infant Mortality by Race

Figure 11: Infant mortality rate, by race, South Dakota 1990 – 2005



- In the United States in 2003, the American Indian infant mortality rate was 8.7 compared to 5.7 for whites.
- South Dakota's infant mortality rate decreased for both whites and American Indians in 2005 after the rise in 2004. The white infant mortality rate decreased from 6.9 to 6.1 per 1,000 live births and the American Indian mortality rate decreased from 13.3 to 11.6 per 1,000 live births.
- In South Dakota, the American Indian neonatal mortality rate dropped below the white neonatal mortality rate in 2005.
- Data shows a troubling rise in infants who died in the neonatal period during the last two years in the white population.
- There continues to be disturbing disparity between the American Indian and white post neonatal mortality rate despite the decrease.

Figure 12: Neonatal and post-neonatal mortality by race, by age, South Dakota, 1990 – 2005

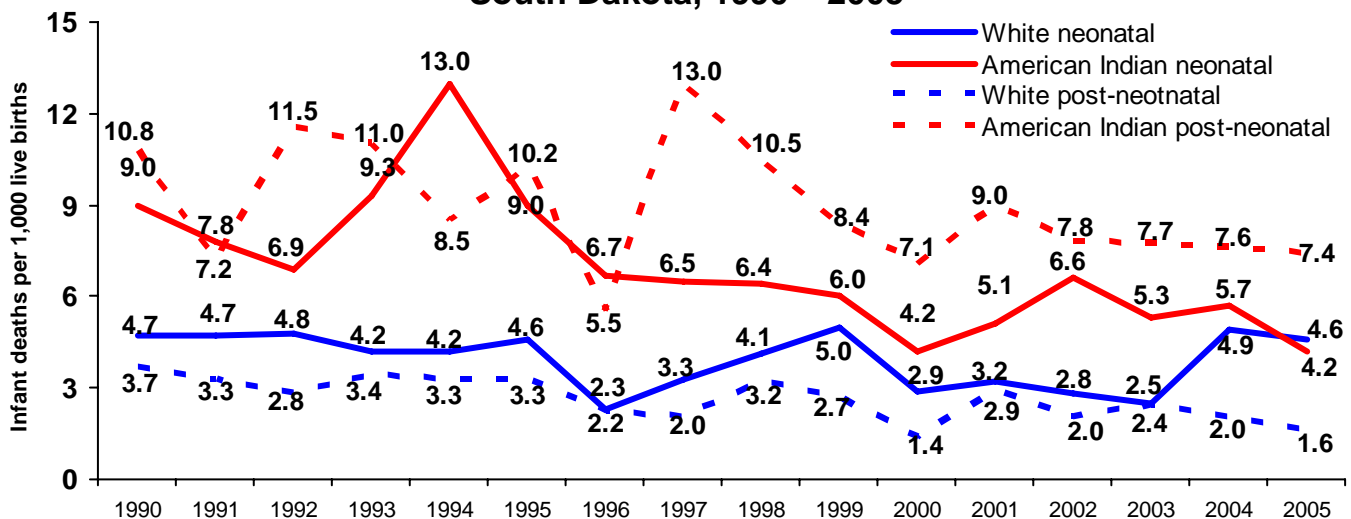
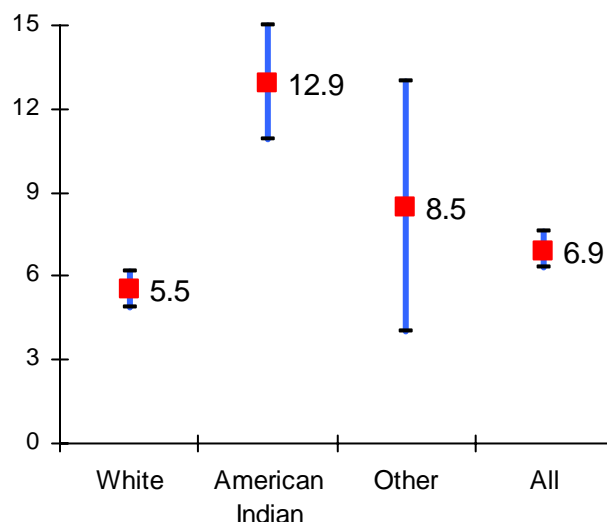


Figure 13: Infant, neonatal, and post-neonatal mortality by race, South Dakota , 2000-2005 (infant deaths per 1,000 live births)

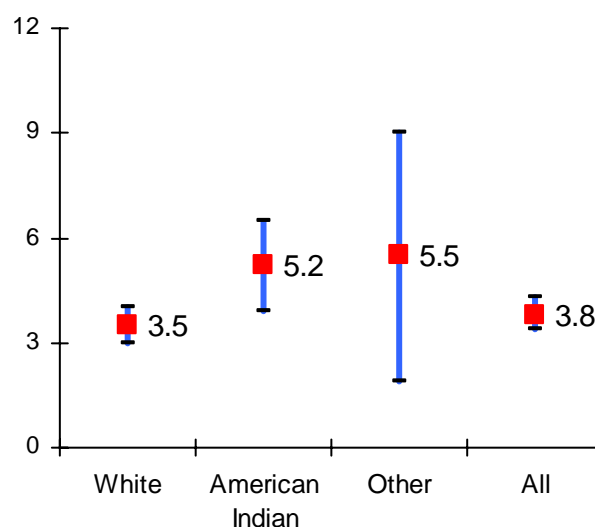
Infant Mortality – Infants who die within one year

- **White infants:**
 - 52,073 live births
 - 289 deaths
 - IMR: 5.5 (95%CI 4.9 - 6.2)
- **American Indian infants:**
 - 11,603 live births
 - 150 deaths
 - IMR: 12.9 (95%CI 10.9 - 15.0)
- **All other race infants:**
 - 1,646 live births
 - 14 deaths
 - IMR: 8.5 (95%CI 4.1– 13.0)



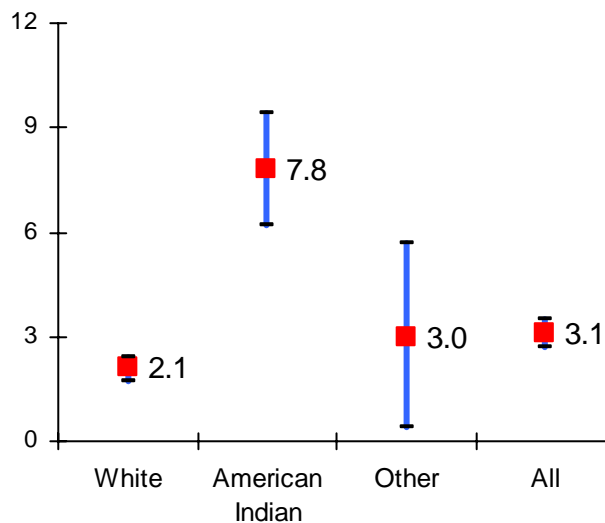
Neonatal Mortality – Infants who die from birth to 27 days old

- **White infants:**
 - 52,073 live births
 - 182 neonatal deaths
 - NMR: 3.5 (95%CI 3.0 - 4.0)
- **American Indian infants:**
 - 11,603 live births
 - 60 neonatal deaths
 - NMR: 5.2 (95%CI 3.9 - 6.5)
- **All other race infants:**
 - 1,646 live births
 - 9 deaths
 - NMR: 5.5 (95%CI 1.9 – 9.0)



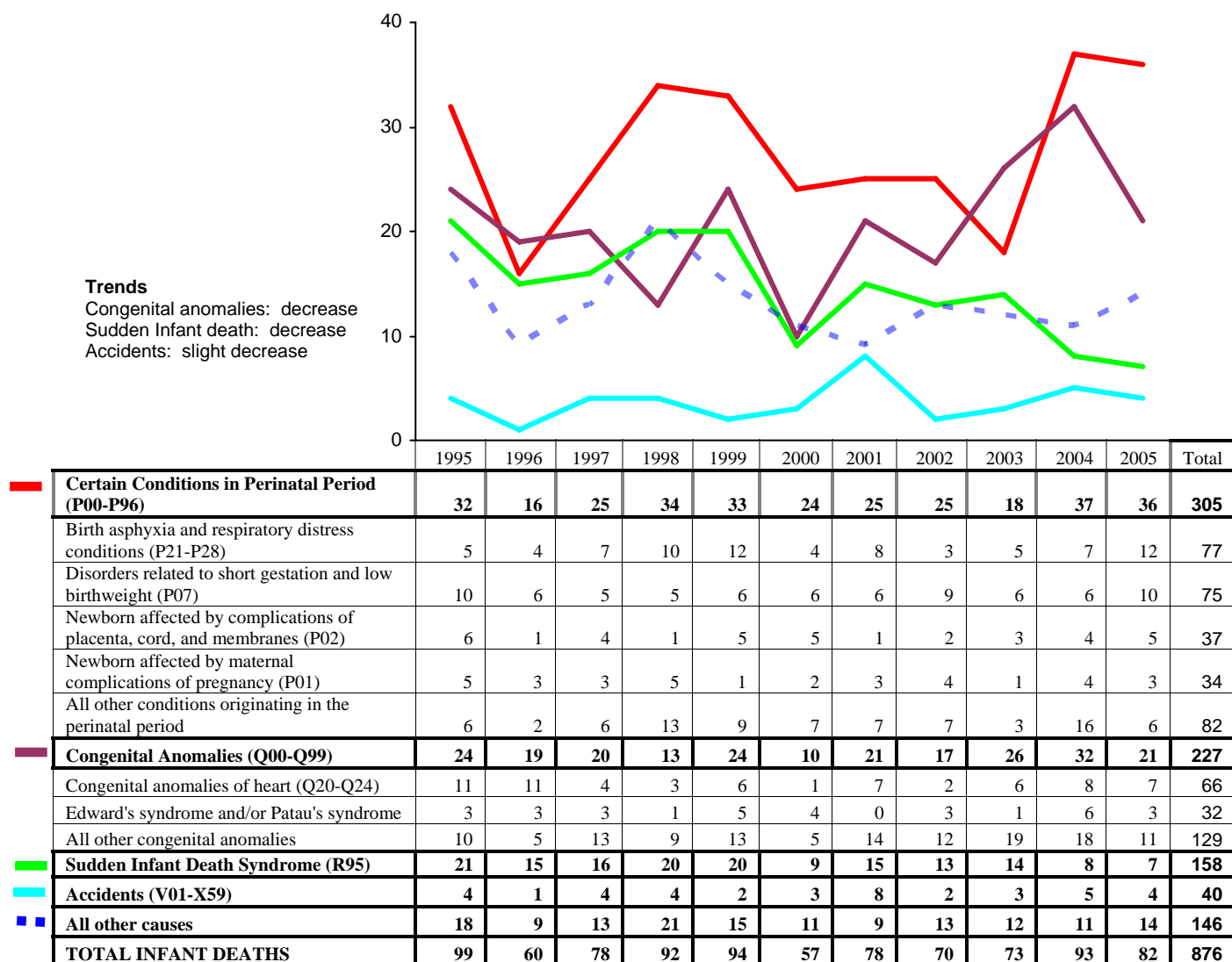
Post-neonatal Mortality – Infants who die from 28 days to one year

- **White infants:**
 - 52,073 live births
 - 107 post-neonatal deaths
 - PNMR: 2.1 (95%CI 1.7 - 2.4)
- **American Indian infants:**
 - 11,603 live births
 - 90 post-neonatal deaths
 - PNMR: 7.8 (95%CI 6.2 - 9.4)
- **All other race infants:**
 - 1,646 live births
 - 5 post-neonatal deaths
 - PNMR: 3.0 (95%CI 0.4 - 5.7)



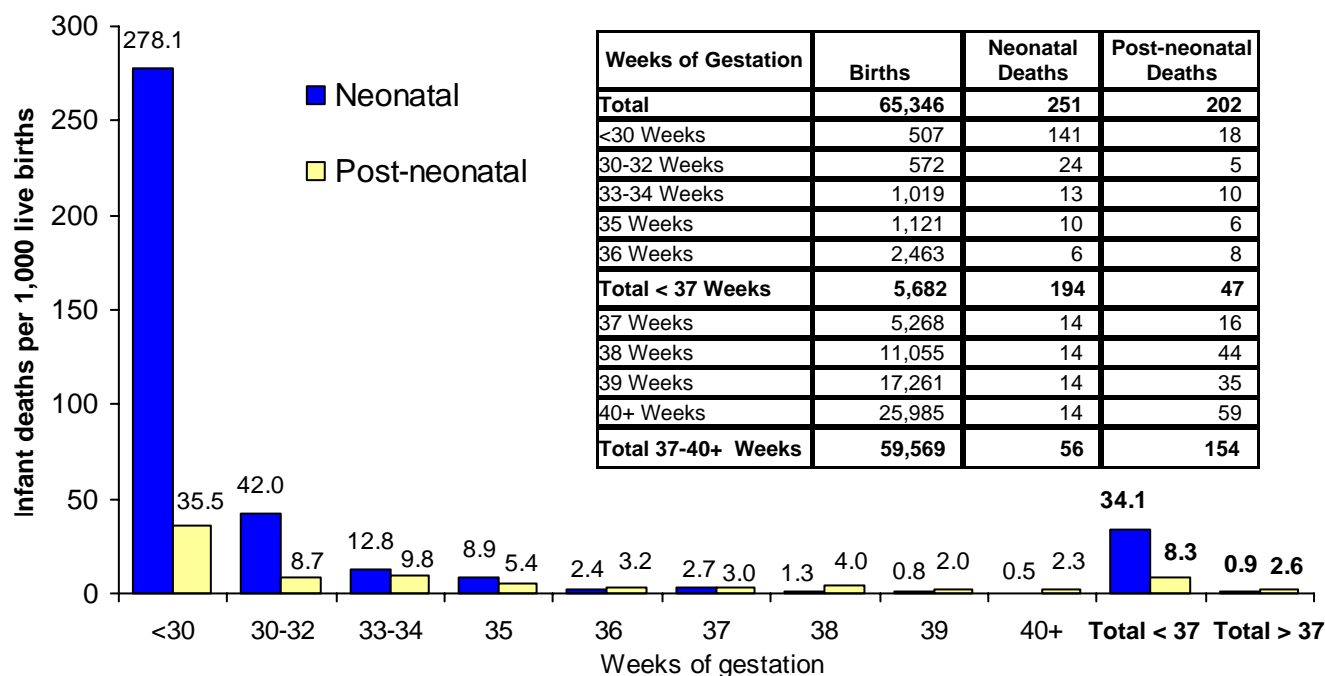
Causes of Infant Mortality

Figure 14: Causes of infant mortality, South Dakota 1995-2005



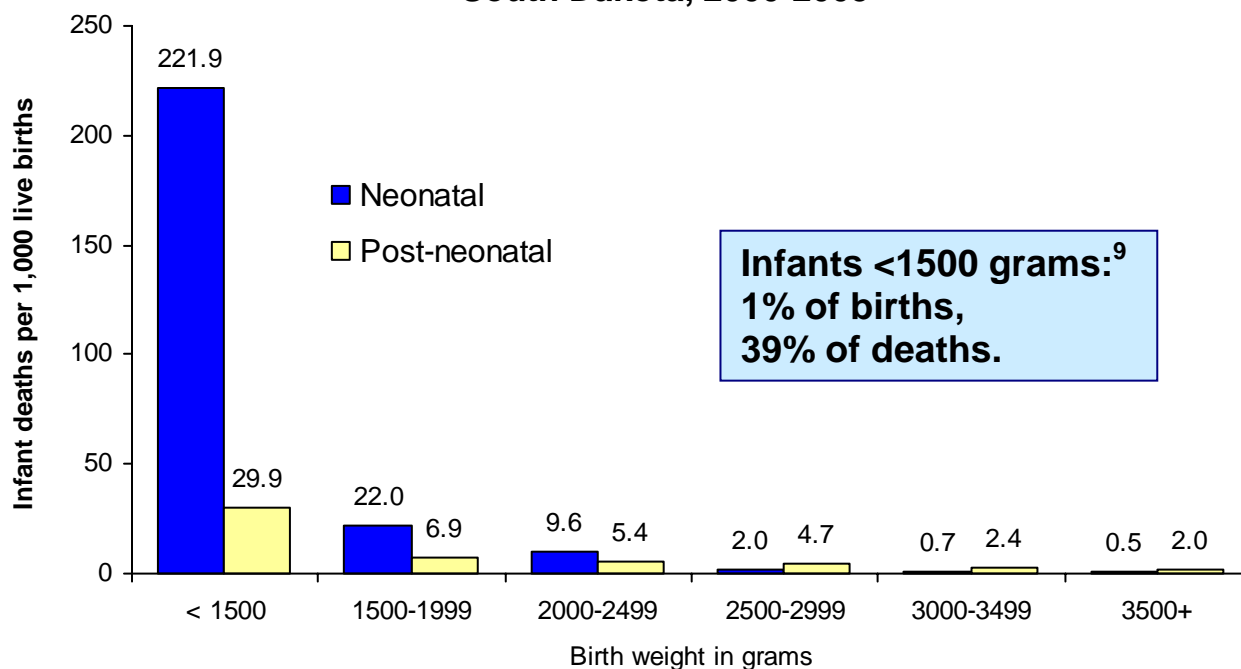
- For the 10 year time period, South Dakota's leading cause of infant deaths was certain conditions in the perinatal period, which includes short gestation, low birth weight, complications of pregnancy, respiratory distress, etc.
- Congenital anomalies were the second leading cause of infant death.
- SIDS (Sudden Infant Death Syndrome) was the third leading cause of infant death. Deaths due to SIDS continue to decline.
- Accidents were the fourth leading cause of infant death. Accidents include motor vehicle accidents, falls, accidental drowning or poisoning, etc.

Figure 15: Gestation period by neonatal and post-neonatal mortality rates, South Dakota. 2000-2005



- Short gestational age was the leading cause of death of infants in South Dakota. Of the neonatal deaths occurring between 2000 and 2005, over 77 percent were of infants born before 37 weeks of gestation.
- Preterm infants are generally underweight.
- Infants that weigh less than 1,500 grams at birth were only 1 percent of the births but accounted for 39 percent of the deaths.

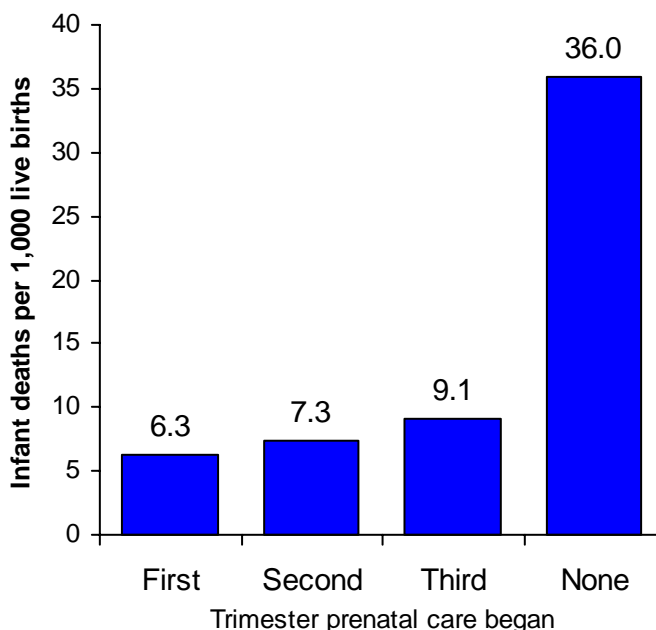
Figure 16: Birth weight: neonatal and post-neonatal mortality rate, South Dakota, 2000-2005



Prenatal Care

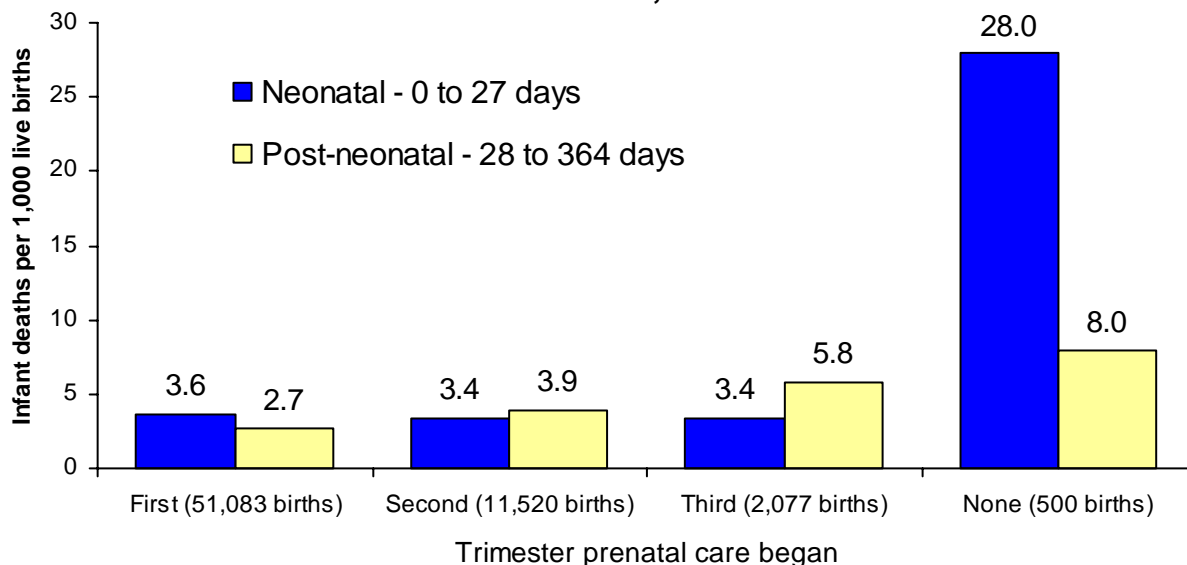
Figure 17: Trimester prenatal care began, South Dakota 2000-2005

- Statistics show that early and continuous prenatal care improved pregnancy and health outcomes for mother and child.
- The earlier prenatal care was received the less likely the baby was to die.
 - First trimester: 51,083 births (78%), 324 deaths, 6.3 infant mortality rate
 - Second trimester: 11,520 births (18%), 84 deaths, 7.3 infant mortality rate
 - Third trimester: 2,077 births (3%), 19 deaths, 9.1 infant mortality rate
 - None: 500 births (1%), 18 deaths, 36.0 infant mortality rate



- Ninety-nine percent of South Dakota infants had some prenatal care while one percent had no prenatal care.
- The infant mortality rate was 6 times higher for those moms receiving no prenatal care than those mothers receiving prenatal care in the first trimester.
- The neonatal mortality rate was nearly eight times higher for those moms receiving no prenatal care.
- Prenatal care data shows that South Dakota lags behind other states in the region with 78 percent of pregnant women receiving first trimester care. Of the 41 reporting states in 2004, South Dakota was fifth lowest in the nation in this indicator according to National Vital Statistics Reports ⁷.

Figure 18: Prenatal Care: neonatal and post-neonatal mortality rates, South Dakota, 2000-2005



0% No Prenatal Care

0.1% - 1.0% No Prenatal Care

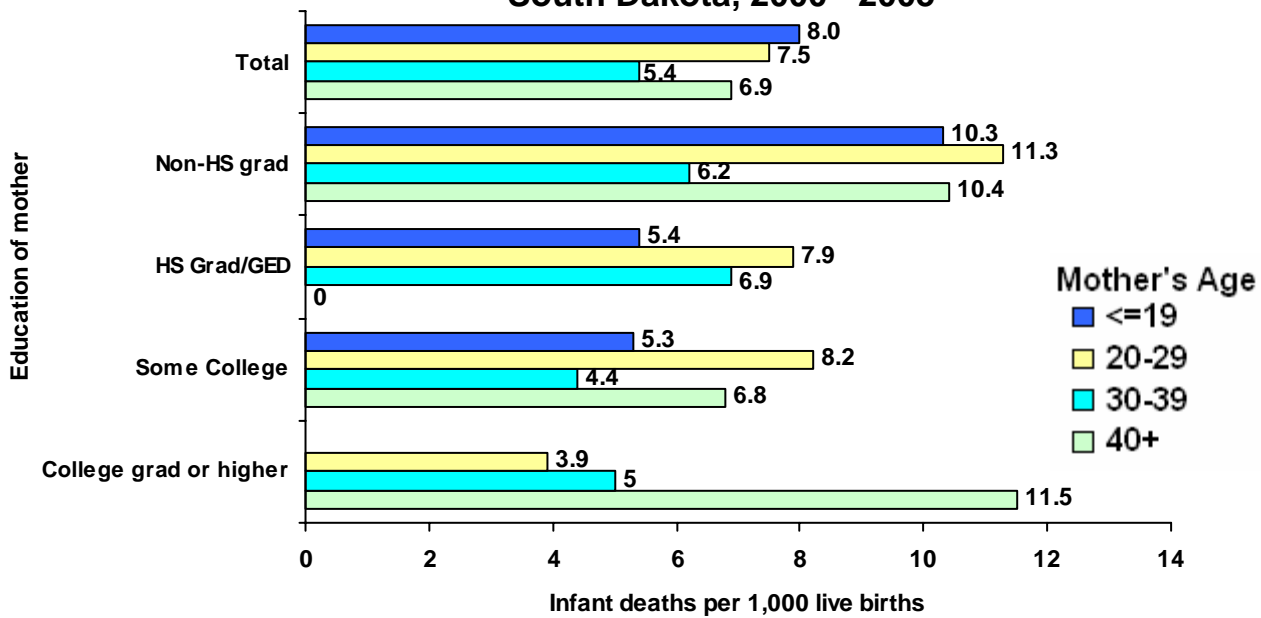
1.1% - 4.0% No Prenatal Care

Figure 22: Infant mortality rates, by gender, South Dakota, 2000-2005

- Infant males were 59 percent of the infant deaths.
- Males accounted for 51 percent of the births.
- The male infant mortality rate was 8.0 per 1,000 live births compared to 5.8 for females.



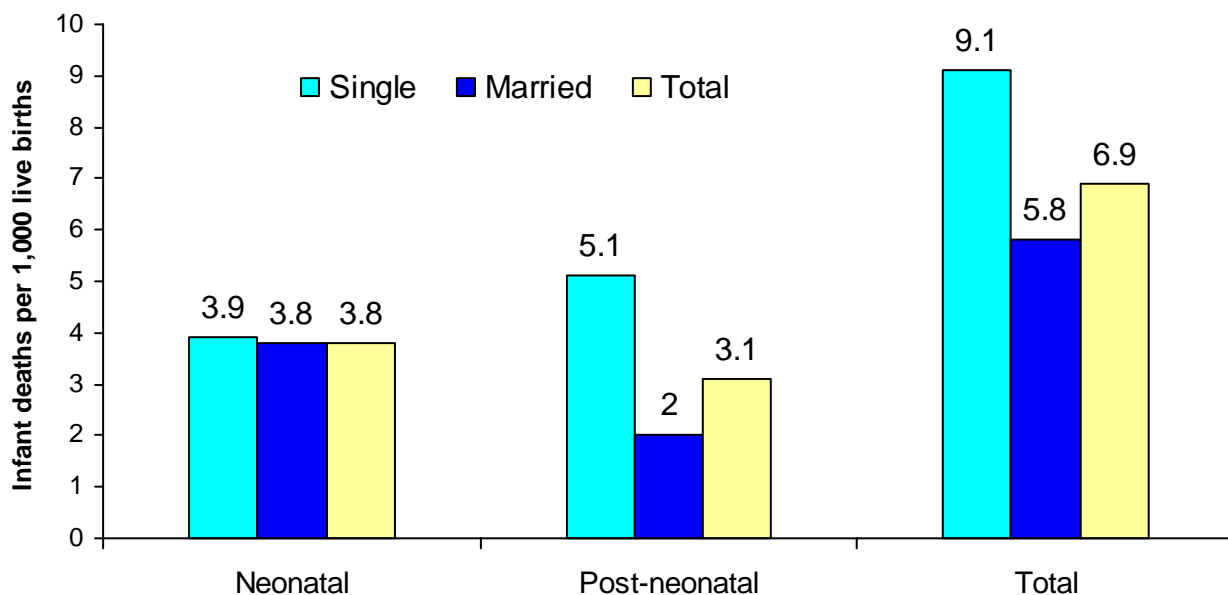
Figure 20: Infant mortality by education and age of mother, South Dakota, 2000 - 2005



Mother's Demographics

- Mothers who had less than a high school diploma had a higher infant mortality rate than those mothers who finished high school.
- Mothers 19 years of age and younger had the highest infant mortality rate.
- Single mothers had a higher infant mortality rate at 9.1 per 1,000 live births compared to married mothers at 5.8. The disparity exists mostly in the post-neonatal period.

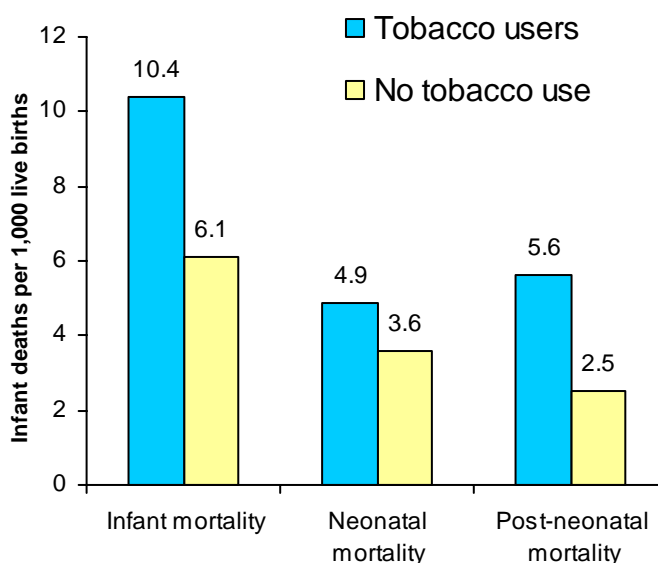
Figure 21: Marital Status: neonatal, post-neonatal, and infant mortality rates, South Dakota, 2000-2005



Tobacco Use

Figure 23: Tobacco use, neo- and post-neonatal mortality rates, South Dakota, 2000-2005

- Tobacco use leads to higher infant mortality rates.
- Data indicates that tobacco use contributes to lower birth weight and pregnancy complications.
 - Tobacco users: 12,367 births, 129 deaths
 - Non-users: 52,894 births, 321 deaths
 - White mothers: 17% use tobacco
 - American Indian mothers: 28% use tobacco

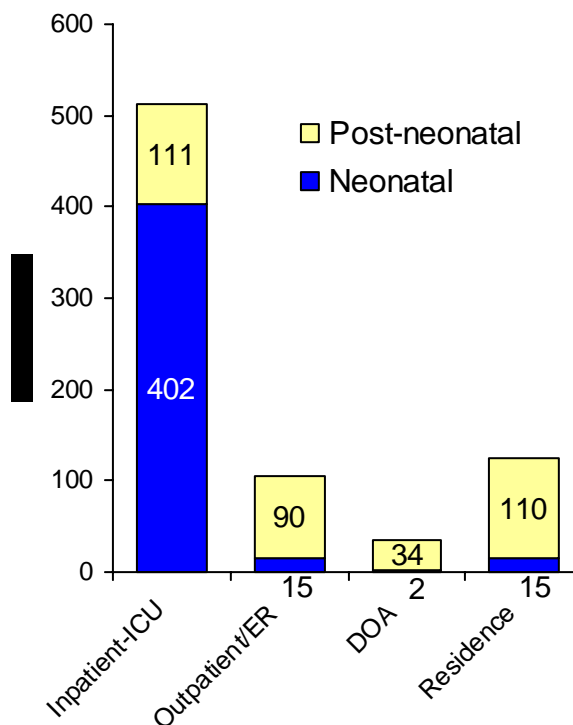


- Of the mothers whose infants died in the first year of life, 28.5 percent reported using tobacco. Forty-three percent of these mothers were American Indian.
- Of the mothers who used tobacco, 63.6 percent were unmarried and 28.2 percent had not graduated from high school.
- Nationally, cigarette smoking during pregnancy had been declining since 1989, to 10.2 percent of mothers in 2004. In 2003, 12.4 percent of births to smokers were low birth weight, compared with 7.7 percent of births to nonsmokers.
- In South Dakota, tobacco use during pregnancy had declined from 19.9 percent in 2000 to 18 percent in 2005.
- In 2005, 7.6 percent of mothers who used tobacco in South Dakota during pregnancy had a baby under 2,500 grams compared to 4.6 percent to nonsmokers.

Location

Figure 24: Place of infant deaths, South Dakota, 1995-2005

Place of death	Total deaths	Neo-natal	Post-neonatal
Total 100%	876	479 (100%)	397 (100%)
Inpatient/ICU 59%	513	402 (84%)	111 (28%)
Outpatient/ER 12%	105	15 (3%)	90 (23%)
DOA 4%	36	2 (1%)	34 (8%)
Residence 14%	125	15 (3%)	110 (28%)
Other 3%	25	3 (1%)	22 (5%)
Out of State 8%	72	42 (8%)	30 (8%)

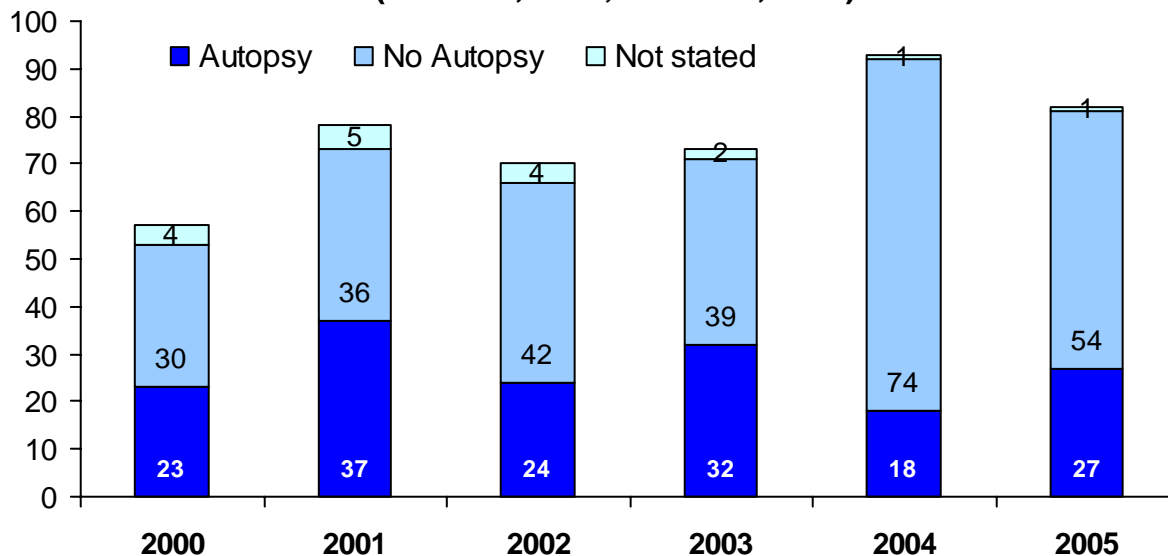


- Of the 14 percent of the deaths that occurred at a residence, 56 percent of those deaths were attributed to either accidental suffocation or Sudden Infant Death Syndrome (SIDS).

Autopsy

- During the time period of 2000 to 2005, 36 percent of the infants who died were autopsied. In 2004, when the highest infant mortality rate occurred, only 19 percent of the infants were autopsied.

Figure 25: Was an infant autopsy performed, 2000-2005?
(Yes 161, 36%; No 275, 61%)

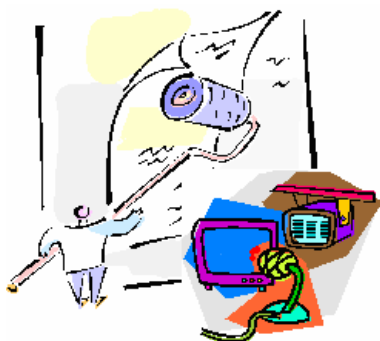


Activities

The infant mortality work group identified 6 activities to improve the South Dakota infant mortality rate and the underlying disparities. Those activities are as follows:

Media Campaign

Implement a media campaign addressing signs and symptoms of pregnancy, the importance of not smoking during pregnancy, and the importance of early and regular prenatal care.



- Create culturally specific media materials for television, radio and billboards.
- Create culturally specific printed materials such as brochures, information cards and posters.
- Promote the use of the DOH QuitLine by pregnant mothers and mothers with infants under age one.
- Expand the current DOH website for pregnancy information.

Health Care Provider Training

DOH and USD Sanford School of Medicine will partner to train health care providers across the state in the following focus areas:

- *Smoking* - provide health care providers with information on the effects of smoking on the unborn child and also the negative effects of second hand smoke on the infant.
- *Recognition of sick children* - educate providers on medical markers to help them recognize sick children.
- *Early & regular prenatal care* – provide healthcare providers with information on prenatal care standards and the importance of early and regular prenatal care.



Department of Health and Tribal Plains Healthy Start

Enhance the working relationship between the Northern Plains Healthy Start* and the DOH. Key topics such as transportation, access to care, smoking, prenatal care standards, etc. will be discussed to determine how as a team Northern Plains Healthy Start and the DOH can best improve the health of American Indian children and mothers.

**Northern Plains Healthy Start* is a targeted case management program which uses a holistic approach respecting the importance of family, extended family, physical, emotional, psycho-social and spiritual health and the continued support for Indian family values to improve birth outcomes.

Trauma

Work with the South Dakota Trauma System Steering Committee to improve medical response for sick and injured infants in rural and frontier areas.

Education for Young Mothers

Maintain and strengthen current services to teens and young moms through the Department of Health programs.

- Complete a risk assessment on all pregnant teens who seek services through DOH programs.
- Encourage early and regular prenatal care for all pregnant teens.
- Provide prenatal, postpartum and parenting education for all pregnant teens receiving Baby Care services.
- Provide intensive prenatal, postpartum and parenting education to high risk pregnant teens in Sioux Falls and Rapid City through the Bright Start program.



Publication

Publish and distribute a report on infant mortality which summarizes and establishes activities based on the data reviewed by the committee to increase awareness of the problem of infant mortality.

Definitions:

Infant mortality definitions

- **Infant mortality rate:** The number of infants who die within one year of birth divided by the number of infants who are born, multiplied by 1,000, expressed as the ratio of infant deaths per 1,000 live births.
- **Infant death:** death of a live-born infant less than one year (364 days) of age.
- **Neonatal death:** death of a live-born infant from birth to 27 days old.
- **Post-neonatal death:** death of an infant occurring 28 days to one year of age.

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8. National Center for Health Statistics, Health, United States, 2006, With Chartbook on Trends in the Health of Americans, Hyattsville, Maryland: 2006. <http://www.cdc.gov/nchs/data/hus/hus06.pdf>
9. The equivalents of the gram intervals in pounds and ounces are as follows:

<= 1,499 grams	=	<= 3lbs. 4ozs.
1,500 – 2,499 grams	=	3lbs. 5ozs – 5lbs. 8ozs.
>= 2,500 grams	=	>= 5lbs. 9ozs.

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